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ABSTRACT

According to an attribution analysis, changing one's opinion toward the position advocated in a persuasive message is an outcome of one's inferences concerning why the communicator has taken the position. A study was undertaken to clarify the cognitive steps by which recipients went from information about communicator characteristics or situational pressures on the communicator to changing (or not changing) their opinions. Premessage expectancies were examined by means of "expectancy subjects," who were not exposed to a message but received information about an attribute of the communicator. To demonstrate that this information created an expectancy about the communicator's position, these subjects then estimated the position the communicator would take in the message. This assumed that subsequent to receiving the communicator's position on the issue, recipients made use of the causally relevent information they had available prior to the message. The degree to which this premessage expectancy was confirmed by the position the communciator took in the message was then assumed to affect the outcome at each step of the recipients' postmessage processing. The general impression conveyed by the findings of this study is a lack of sensitivity of premessage and postmessage processing to variations in the communication situation. (HOD)

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Stages in the Analysis of Persuasive Messages: The Role of Causal Attributions and Message Comprehension

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Stages in the Analysis of Persuasive Messages: The Role of Causal Attributions and Message Comprehension

According to an attribution analysis, changing one's opinion toward the position advocated in a persuasive message is an outcome of one's inferences concerning why the communicator has taken this position (Kelley, 1967, 1972). It has been shown that message recipients' explanations are initiated by information about communicator characteristics or situational pressures on the communicator (Eagly, Wood, & Chaiken, 1978). Recipients explain why a communicator took a particular position by invoking as causes communicator characteristics such as political affiliation or situational pressures such as surveillance by powerful others. Yet the cognitive steps by which recipients go from information about such factors to changing (or not changing) their opinions have not been well articulated. The present study attempts to clarify these steps.

The attribution approach assumes that recipients' inferences concerning why a communicator advocates a particular position on an issue are based on information they possess about characteristics of the communicator (e.g., personality traits, orientation on related issues) and about external pressures in the communicator's situation (e.g., access to prejudiced media or other factors limiting the information available to the communicator). One way that such information may affect message persuasiveness is by leading recipients to infer that a communicator's issue-relevant knowledge is nonverdical. For example, a communicator attribute, such as political affiliation, or a situational pressure, such as newspaper censorship, may imply that the communicator's knowledge is nonverdical concerning an issue such as the effectiveness of labor unions. It is such a belief about

defects in a communicator's issue-relevant knowledge, termed knowledge bias by Eagly, Wood, and Chaiken (1978), that is explored in the present study.[1]

To clarify the inference process by which recipients utilize causally relevant information in deciding whether to accept a message, several information-processing steps need to be delineated. Premessage as well as postmessage processing must be considered. Prior to the message, recipients may use information about the communicator and his or her situation to form premessage expectancies concerning what position the communicator will advocate. If the available information implies limitations in the communicator's issue-relevant knowledge, recipients believe that the communicator's message will reflect a knowledge bias. The present study examines these premessage expectancies by means of "expectancy subjects," who were not exposed to a message, but received information about an attribute of the communicator. To demonstrate that this information created an expectancy about the communicator's position, these subjects then estimated the position the communicator would take in the message.

Our analysis assumes that subsequent to receiving the communicator's position on the issue, recipients make use of the causally relevant information they had available prior to the message. Recipients examine the position the communicator took in the message in relation to what they had previously expected that position to be. Recipients' conclusion about whether their expectancies have been confirmed or disconfirmed forms the basis for their postmessage analysis. By means of a sequence of postmessage processes starting with an explantion of the communicator's position, expectancy confirmation or disconfirmation affects the extent to which recipients change their opinions toward the message.

The stages that comprise recipients' postmessage analysis are represented in the model in Figure 1.

Insert Figure 1 about here

Stages in Postmessage Processing

In the first postmessage step, recipients infer the causes for the position the communicator took in the message. Two types of causes can be invoked: (a) the communicator's personal characteristics or situation, and (b) the factual evidence relevant to the message.

In the next postmessage step, recipients determine the degree to which the communicator is biased in his or her understanding of the issue. To the extent that recipients' first-step processing attributed the message to the communicator's personal characteristics or situation, they tend to perceive the communicator as biased and the message as nonveridical. Conversely, to the extent that the communicator's position was accounted for in terms of factual evidence, he or she is considered unbiased.

In a subsequent postmessage step, the perception of communicator bias generated in the prior step affects message persuasiveness (i.e., change in recipients' opinions). To the extent that a communicator is judged unbiased, the persuasiveness of his or her message is enhanced.

Perceptions of communicator bias also affect recipients' comprehension of message content. Viewed from McGuire's (1969) perspective that the message recipient functions as a "lazy organism" who absorbs message content only when it is necessary to do so, recipients should turn to a detailed analysis of message content to the extent that the available causal information does not allow

them to decide whether to agree with the message. If recipients' causal analysis revealed that the communicator accurately represented the factual evidence and hence is unbiased, they can indicate their opinions without conducting a careful analysis of message content. Message comprehension should then be relatively low. On the other hand, if the causal analysis suggested that the communicator reacted in terms of personal characteristics or situational pressures and is therefore biased, recipients would evaluate message content more carefully to rule out the possibility that the communicator's position might nevertheless be valid for the particular issue.[2] Heightened comprehension of the message would result.

Comprehension of message content is assumed to be positively related to opinion change: Provided that a message contains high-quality argumentation, accurate understanding of message content enhances message persuasiveness (Eagly, 1974; McGuire, 1969).

Confirmation vs. Disconfirmation of Premessage Expectancies

The degree to which recipients' premessage expectancies are confirmed by the message is assumed to affect the outcome at each step of postmessage processing, through the mediation of any prior steps. When the communicator confirms recipients' expectancies, recipients regard the communicator's position as probably caused by the communicator attribute or situational pressure that generated their expectancy. When the communicator disconfirms recipients' expectancies, recipients judge that such a communicator was unaffected by the factor(s) that generated their expectancy. In this circumstance, the most likely alternative explanation is that the external reality described by the message provided especially compelling evidence supporting the

communicator's position. Recipients would reason that the factual evidence must have been especially impressive to overcome the pressure from the communicator attribute or situational factor that recipients had expected would influence the communicator's position.[3]

As a consequence of the link the model provides between these attributions and perceived bias, expectancy confirmation leads to the perception that the communicator is biased, and disconfirmation leads to the perception that the communicator is unbiased.[4] By means of the subsequent link between communicator bias and opinion change, disconfirmation of expectancies should then increase message persuasiveness.

In addition, the positive relation the model assumes between communicator bias and message comprehension implies that the tendency for a disconfirming message to make the communicator appear less biased decreases message comprehension. This lowered comprehension of message content is assumed to decrease message persuasiveness. Therefore, the linkage of perceived bias and opinion change through the mediation of message comprehension attenuates the relatively high level of opinion change for disconfirming messages predicted on the basis of recipients' causal analysis.

Despite the tendency for disconfirming messages to decrease opinion change through the causal relations involving message comprehension, recipients can be expected to change their opinions more toward disconfirming than toward confirming messages. One reason for this prediction is that the tendency for perceived communicator bias to enhance opinion change is mediated by a single causal link in the model (perceived communicator bias→opinion change).

The negative effect of communicator bias on opinion change is mediated through two causal links (perceived communicator bias → message comprehension → opinion change), with the consequence that this effect on opinion change would be weakened or diluted. Assuming that all causal relations are of roughly equal strength, the direct positive effect of communicator bias on opinion change should be greater in magnitude than the indirect negative effect.[5] Overall, then, messages disconfirming recipients' expectancies should be more persuasive than messages confirming them.

To explore the effects of expectancy confirmation, the present experiment includes a manipulation of this variable. Analysis of variance will reveal the manipulation's impact on each of the responses included in the model in Figure 1.

The relationships between variables that are depicted in the model will be examined by a structural analysis on opinion change and other relevant variables. The structural analysis differs from the analysis of variance approach because it focuses on the relation between steps and thereby allows an examination of the sequential aspects of recipients' information-processing. A structural or path analysis is appropriate for use in experimental data to estimate the causal relationships hypothesized among dependent measures (Billings & Wroten, 1978).

The Present Experiment

In the experiment, the communicator advocated either a pro or anti position on the message topic of whether pornography should be restricted. Two groups of subjects were formed on the basis of their initial positions on pornography (pro vs. anti), and each subject received a message opposing her own stand. Premessage expectancies regarding the communicator's position on pornography

were established on the basis of information about his background. This information featured either that the communicator favored or opposed unlimited freedom of speech. In a control condition, no information about the communicator's position on freedom of speech was provided. The communicator then either confirmed this expectancy by advocating a position on pornography consistent with his background on freedom of speech, disconfirmed the expectancy by advocating an inconsistent position, or represented the control condition by advocating a position when recipients lacked information about his background.

To test the limits of the applicability of the present analysis, a manipulation of message discrepancy was included in the experiment. The position the communicator took on pornography was either moderately or extremely discrepant from recipients' initial positions. Discrepancy is one aspect of the communication situation that might affect how perceivers explain unexpected positions. A key assumption of the attribution analysis is that positions inconsistent with available causal information are explained in terms of response to a compelling external reality. However, messages extremely distant from recipients' initial positions often produce less attitude change than moderately discrepant messages (e.g., Bochner & Insko, 1966; Peterson & Koulack, 1969; Whittaker, 1967), as predicted by social judgment theory (Sherif & Hovland, 1961). An attribution interpretation of this phenomenon suggests that very distant messages are typically not believed to provide accurate descriptions of external reality. It is thus possible that accuracy could be doubted and persuasiveness lowered even when the unexpectedness of such a message's position rules out explanation in terms of the

causal information that formed recipients' expectancies. Perhaps, then, unexpected positions are not especially persuasive when they are extremely discrepant from recipients' initial opinions.

Method

Subjects and Design

A total of 400 female undergraduate psychology students participated for course credit: 288 served as persuasion subjects, and 112 as expectancy subjects. The between-subjects factorial design shown in Table 1 (Subjects' Initial Position X Expectancy Confirmation X Discrepancy of Advocated Position) was implemented twice--once for

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Insert Table 1 about here
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persuasion subjects and once for expectancy subjects. An additional 124 students who reported to the experiment proved unsuitable for the design because they indicated on the opinion pretest a neutral position on pornography and therefore could not be assigned a message clearly opposing their own position.

Procedure

Subjects (run in groups of 15 or less) were recruited for an "impression formation" experiment, in which they would be given information about another student's opinions. At the beginning of the session, a pretest assessing opinions on 11 campus issues (including pornography) was administered with the rationale that subjects' own values and beliefs might influence their impressions.

In a written description of the impression formation task, subjects then learned that they would read transcripts from two (actually hypothetical) interviews of the same person. These interviews were supposedly part of a previous psychology experiment. This earlier experiment was described as examining the similarity of people's

opinions over time and across issues. The description of the first interview said that the interviewees were asked to give their opinions on freedom of speech as well as the reasons for their position. The second interview was described as pertaining to the issue of pornography on campus and as conducted three weeks later with the interviewees not aware of any connection to the first interview.

While subjects were reading these instructions, the experimenter collected the preopinion questionnaires, noted each subject's opinion on pornography, and handed out the two transcripts, chosen so that the second transcript opposed each subject's own position. The first transcript gave the interviewee (Jim H.) a message-relevant background, primarily by describing him as favorable or unfavorable to unlimited freedom of speech (or his background was not described). In the second interview, a female graduate student asked Jim about his position on the issue of restricting pornography on campus. In response, Jim gave his position and presented four arguments, three supporting his position and, for plausibility, one weakly countering it (see below for details).

After taking about 10 minutes to read the transcripts, subjects completed a questionnaire on which they again indicated their opinion and gave other responses (see below). Finally, subjects were debriefed and excused.

Expectancy subjects received the same information about the communicator's background but received no persuasive message (second transcript). On the questionnaire, they either estimated the likelihood that the communicator would advocate a moderate position opposing their own position on pornography or estimated the likelihood of an extreme position, and then responded to the other measures described below

(except those requiring knowledge of the second transcript).

Independent Variables

Subjects' initial position. Subjects initially in favor of restricting pornography (positions of 1 through 6 on the 15-point pornography opinion scale mentioned below) read transcripts in which Jim H. opposed restrictions. Subjects initially against restrictions (scale points 10 through 15) read transcripts in which Jim H. favored restrictions.

Expectancy confirmation. Jim H. confirmed subjects' expectancies by advocating a position on pornography consistent with his background: He either opposed pornography restrictions and had a profreedom of speech background or favored pornography restrictions and had an antifreedom of speech background. He disconfirmed expectancies by advocating a position on pornography inconsistent with his background.

When Jim H.'s background was profreedom of speech, he was portrayed as a member of the local Unitarian Church and as in favor of abortion. In addition, he remarked that he had written a paper on freedom of speech for a journalism course so knew something about the issue. Support for freedom of speech was conveyed more directly by the following statements:

> I very definitely think that everyone should have complete freedom of speech. Censoring another person's point of view, or an art form--which is one way people express themselves--is truly violating their rights. You have to remember that censorship is a relative thing--what's offensive and degrading to me may not be to anyone else.

When Jim H.'s background was antifreedom of speech, he was presented as a member of the Catholic Church, as against abortion, and as having written a paper on freedom of speech for a religious studies course. His background was further conveyed by the following statements:

> I very definitely do not think that everyone should have unlimited freedom of speech. There are basic human principles--like the right not to be exploited and the right to be treated like a human being--which are a lot more important than a concept like freedom of speech. When people feel these principles are being violated, they must be allowed to impose some humane standards on what is publicly broadcast--what we read and see.

In control conditions, no issue-relevant information about Jim H.'s background was presented.

In the persuasive message, Jim H. stated that he had recently read an article about pornography indicating that it has some clearly identified effects on viewers. When taking an antirestrictions position, Jim's two major arguments were that pornography has a "cathartic-like effect on people" and that Scandinavian census data showed a decrease in sex-related crimes since the legalization of pornography. The prorestrictions message claimed that pornography encourages modeling behavior in viewers and that Scandinavian data revealed an increase in sex-related crimes after pornography was legalized.

Discrepancy of advocated position. Discrepancy was manipulated by varying the strength of the communicator's position (cf. Fishbein & Ajzen, 1975; Hovland & Pritzker, 1957). In the second interview, Jim

stated either that he felt "moderately" or that he felt "strongly" about the pornography issue. To express a moderate position, Jim said that, although there were good reasons on both sides of the issue, "I guess it possibly should(n't) be allowed on campus." To express an extreme position, Jim stated that there were several good reasons for his position and that "I definitely think it should(n't) be allowed on campus."

Measuring Instruments

Checks on implementation of experimental design. On a 15-point scale, subjects estimated the extent to which the communicator had previously supported freedom of speech. They also indicated (on the opinion scale described below) the position he took on pornography in the second interview. On a 15-point scale ranging from "Very likely" to "Very unlikely," expectancy subjects judged either the likelihood that the communicator would advocate a moderate position on pornography or the likelihood that he would advocate an extreme position.

Causal attributions. On 15-point scales anchored by "Extremely important" and "Extremely unimportant," subjects judged the influence of the following factors on the communicator's stated position: (a) his previous position on freedom of speech and (b) the factual evidence concerning restricting pornography. Since it was possible that some subjects might infer that Jim's stated position on pornography was constrained by the views of the interviewer, subjects also rated the importance of the interviewer's opinion as an influence on Jim H. (and estimated the interviewer's opinion on pornography).

Communicator bias. Subjects rated the communicator on 15-point bipolar evaluative scales having the positive poles consistent, honest,

sincere, nonopportunistic, nonmanipulative, noncompliant, open-minded, unbiased, objective, and likeable. Similar to Eagly, Wood, and Chaiken (1978), a factor analysis (varimax rotation) yielded three factors, which were labeled "Sincere" (e.g., honest, sincere), "Unbiased" (e.g., open-minded, unbiased), and "Nonmanipulative" (e.g., nonopportunistic, nonmanipulative). These factors accounted for 20.4%, 16.8%, and 12.0% of the total variance, respectively. Factor scores were computed for each subject and submitted to the analysis described below. The consistent and objective scales, which failed to load highly on any factor, were analyzed separately. Because the analyses (see below) did not reveal any significant effects on either the sincere or nonmanipulative factors, they are omitted from the report of results.

Message comprehension. Subjects were asked to write down each argument from the message, which contained four arguments. Comprehension was scored for correctness by two independent raters (r = .84, 82% agreement) who were blind to subjects' experimental conditions.

Opinions. On a 15-point opinion scale ranging from "Strongly in favor of restrictions" on pornography to "Strongly against restrictions," subjects indicated their initial and final opinions.

Other measures. On 15-point scales, subjects estimated the communicator's "true, private opinion" on pornography as well as the importance of this issue relative to other social issues. Subjects also wrote down their interpretations of the experiment. Two raters (100% agreement) coded these responses for disbelief in the cover story, and one subject was eliminated.

Results

The hypotheses were tested by analysis of variance and planned contrasts and by structural analysis.

Checks on Implementation of Experimental Design

Subjects' initial position. Analysis of subjects' premessage opinions showed that subjects were correctly classified as either favoring (M = 3.68) or opposing (M = 12.33) restricting pornography ($p < .001$). The analysis yielded no other significant effects.

Expectancy confirmation. The manipulation of expectancy confirmation is a product of subjects' perception of both the communicator's background on freedom of speech and the position he advocated on pornography (see Table 1). These two components of the manipulation were appropriately perceived: (a) the source with the profreedom of speech background was judged more in favor of freedom of speech (M = 13.96) than the control source (M = 8.41), and the control source more in favor than the antifreedom source (M = 2.63, $ps < .001$), and (b) the source was perceived as opposing restrictions on pornography in the antirestrictions conditions (M = 12.47) and as favoring restrictions in the prorestrictions conditions (M = 3.37, $p < .001$).

Providing evidence for the formation of premessage expectancies were the expectancy subjects' likelihood ratings, which yielded a significant main effect for expectancy confirmation, F (2,100) = 49.28, $p < .001$. Planned comparisons revealed that the communicator was judged more likely to advocate the positions on pornography given in the expectancy confirmed conditions (M = 12.04) than those given in the expectancy disconfirmed conditions (M = 4.11, $p < .001$), and both confirmed and disconfirmed conditions differed from the control conditions (M = 7.80, $ps < .05$). Similar effects were obtained on the persuasion subjects' ratings of the communicator's consistency: He

was viewed as more consistent in the confirmed (M = 11.19) than disconfirmed conditions (M = 5.04), and both confirmed and disconfirmed conditions differed from the control conditions (M = 7.44, $ps < .001$). It should also be noted that the likelihood ratings indicated that the communicator was perceived as slightly more likely to advocate a moderate than an extreme position, F (1,100) = 2.79, p = .10.

To insure that any effects of expectancy confirmation were not artifacts of the communicator's likeability or other attributes, the design also required that, prior to message delivery, these attributes be perceived as unrelated to his background on freedom of speech. This requirement was adequately met: Expectancy subjects' ratings of the communicator on the ten bipolar evaluative scales were essentially equivalent across conditions.[7]

Discrepancy of advocated position. That message positions extremely discrepant from recipients' initial opinions were considered more polarized than those moderately discrepant was shown by a significant Initial Position X Discrepancy interaction on subjects' judgments of the position advocated ($p < .001$). Planned comparisons showed that recipients viewed both the anti- and the prorestrictions extreme messages as more polarized (Ms = 13.93 and 1.81, respectively) and therefore more discrepant from subjects' initial opinions than the moderate messages (Ms = 11.02 and 4.93, $ps < .001$).

Analyses of Variance on Dependent Measures Represented in Structural Model[8]

Causal attributions. Ratings of the importance of the communicator's background (i.e., his position on freedom of speech) and of factual evidence as influences on his stated position indicated that expectancy confirmation had the intended effect on perceived causation. (Means for these and the remaining dependent variables are given

in Table 2, combined across levels of subjects' initial position and discrepancy.) The communicator's background was considered a more

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Insert Table 2 about here

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important influence on his stated position when he confirmed rather than disconfirmed expectancies, F (1,275) = 143.04, $p < .001$, and both confirmed and disconfirmed conditions differed from the control conditions, Fs (1,275) = 56.25 and 20.34, ps $< .001$. Factual evidence was a more important influence in the disconfirmed compared to confirmed conditions, F (1,275) = 10.89, $p < .001$. Only the disconfirmed conditions differed from the control conditions, F (1,275) = 9.73, $p < .001$.

Communicator bias. The communicator was perceived as more biased when he confirmed (rather than disconfirmed expectancies, F (1,275) = 33.40, $p < .001$. Only the disconfirmed conditions differed significantly from the control conditions, F (1,275) = 15.83, $p < .001$. The communicator was also regarded as less objective when he confirmed (M = 6.96) rather than disconfirmed expectancies (M = 8.78, $p < .001$). Only the confirmed conditions differed from the control conditions (M = 8.31, $p < .001$).

Message comprehension. In the disconfirmed conditions, fewer arguments were comprehended than in the control conditions, F (1,275) = 4.88, $p < .05$, and marginally fewer than in the confirmed conditions, F (1,275) = 3.57, $p < .07$. The confirmed and control conditions did not differ.

Opinion change. Opinion change scores were formed by treating change toward the advocated position as a positive difference and change away as a negative difference.[9] Subjects changed their opinions more when the message disconfirmed rather than confirmed their

expectancies, F (1,275) = 5.02, $p < .03$. Neither confirmed nor disconfirmed conditions differed from the control.

Analyses of Variance on Other Dependent Variables

The communicator's true, private opinion on pornography was judged more polarized both in conditions in which the source's background was consistent with the position he advocated (Ms = 4.32 and 12.33 for prorestrictions and antirestrictions sources, respectively, on a scale on which 1 = strongly in favor of restrictions and 15 = strongly against) and in the control conditions (Ms = 5.14 and 12.00), compared to conditions in which his background was inconsistent with the position advocated (Ms = 5.69 and 9.06). Analysis of this effect yielded a significant Initial Position X Confirmation interaction ($p < .001$). This finding, which will not be discussed further because it does not bear on the hypotheses of the study, suggests that information about the communicator's position and information about his background both contributed to the subjects' inferences about the communicator's true opinion, roughly according to an additive integration rule. Other significant effects were obtained on this dependent variable, but were either trivial or uninterpretable.

Ratings of the importance of the issue revealed that the issue was, in general, neither important or unimportant (M = 8.86), and that subjects initially favoring restrictions on pornography believed the issue was more important than those initially opposing restrictions ($p < .001$). No significant effects were obtained on the measures relating to the possible influence of the interviewer's opinion.

Structural Analysis

A structural analysis was conducted to examine how subjects'

Insert Table 3 about here

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information-processing affects opinion change. Because the information subjects possessed differed according to the level of expectancy confirmation, this analysis was conducted separately for the confirmed, the disconfirmed, and the control conditions. Correlations (see Table 3) were calculated on data pooled over the variations of subjects' initial position and message discrepancy, which had little effect on subjects' responses. To estimate the parameters of the causal model specified in Figure 1, the analysis first constructed three separate multiple regression equations (Kerlinger & Pedhazur, 1973). In these equations, communicator bias, message comprehension, and opinion change were each predicted from all variables assumed to be causally prior. Any predictor that failed to show at least a marginally significant ($p < .10$) relationship to the criterion variable in an equation was deleted from that equation. Each regression equation was recomputed with only its remaining predictors, and the resulting beta weights were intepreted as path coefficients. As Figure 2 shows, somewhat different structural models were obtained in the three conditions.

Insert Figure 2 about here

In the expectancy disconfirmed conditions, the regression of communicator bias on the prior variables--attribution of message to communicator's background and attribution of message to factual evidence--found both predictors significant (see Figure 2). Together they accounted for 10% of the variance in communicator bias ($R = .32$, $p < .05$). The regression of message comprehension on the variables prior to it--attribution of message to communicator's background, attribution of message to factual evidence, and

communicator bias--revealed that only communicator bias was a significant predictor. The regression of opinion change on the variables prior to it--attribution of message to communicator's background, attribution of message to factual evidence, communicator bias and message comprehension--revealed that only communicator bias and message comprehension were significant. Together these two predictors accounted for 21% of the variance in opinion change ($\underline{R} = .46$, $\underline{p} < .001$). A chi-square goodness-of-fit test revealed that the proposed causal structure appropriately reflected the causal process that generated the data, $\chi^2(4) = 1.36$, $\underline{p} > .75$ (Specht, 1975).[10]

In the expectancy confirmed conditions, the results of the structural analysis were similar, except that message comprehension was not significantly predicted by communicator bias ($\underline{B} = .13$; see Figure 2). The significant predictors of communicator bias (attribution of message to communicator's background and attribution of message to factual evidence) accounted for 14% of its variance ($\underline{R} = .36$, $\underline{p} < .01$), and the significant predictors of opinion change (communicator bias and message comprehension) accounted for 10% of its variance ($\underline{R} = .31$, $\underline{p} < .05$). A goodness-of-fit test again indicated that the model is a plausible representation of the obtained data, $\chi^2(5) = 3.53$, $\underline{p} > .50$. In order to determine whether the removal of the path linking bias and message comprehension significantly reduced the fit, the model without this parameter was compared to a model

which included this link (Specht, 1975). The results revealed that omitting the path did not significantly reduce the adequacy of the model, $\chi^2(1) = 2.48$, $p > .10$.

In the control conditions, in which subjects lacked information about the communicator's background, the model fit the data less adequately (see Figure 2). Once again message comprehension was not predicted by communicator bias ($B = .00$). Also, communicator bias was not predicted by attribution of message to communicator's background or attribution of message to factual evidence (B's = .03 and -.16, respectively). The significant predictors of opinion change (communicator bias and message comprehension) accounted for 13% of its variance ($R = .36$, $p < .01$). The model provided a poor fit to the data in the control conditions, $\chi^2(8) = 31.74$, $p < .001$.

Discussion

When the communicator's position on an issue disconfirmed subjects' expectancies based on the communicator's background, he was more persuasive than when subjects' expectancies were confirmed. This finding replicates earlier work (Eagly, Wood, & Chaiken, 1978) and supports the attribution interpretation of opinion change. By displaying the cognitive processing underlying this finding, the study furthers understanding of the role of causal attributions in persuasion.

Interpretation of the study's findings is aided by the strong effects obtained on the various manipulation checks: The three independent variables of the design--subjects' initial position, expectancy confirmation, and discrepancy--were shown to be

appropriately operationalized. Further, the premessage equivalence of the communicators on the various trait rating scales ruled out alternate interpretations of the findings in terms of unintended effects of the independent variables on communicator attributes such as likeability.

The fact that the findings of the present study were essentially unaffected by the variations of subjects' initial position and of message discrepancy suggests that our analysis may have considerable generality over stimulus conditions. Although the subjects' initial position variable merely provided an internal replication of the findings, the rationale for manipulating discrepancy was that a very discrepant message might decrease the likelihood that expectancy disconfirmation would enhance message persuasiveness, because it might not be viewed as valid, even if it did disconfirm a premessage expectancy. The lack of effects from the discrepancy manipulation may stem from the fact that the message topic was not especially involving for subjects (Sherif & Hovland, 1961). Yet the general impression conveyed by the findings of the present study is a reassuring lack of sensitivity of premessage and postmessage processing to variations in the communication situation.

Confirmation vs. Disconfirmation of Expectancies

As in earlier experiments (Eagly & Chaiken, 1976; Eagly, Wood, & Chaiken, 1978), premessage expectancy formation was assessed by means of subjects who received information about the communicator's background and then estimated how likely it was that he would take a particular position on the issue. Analysis of variance demonstrated that subjects expected the communicator to advocate a position on the message topic (restricting pornography) consistent with his

background, which had been conveyed by infor ation about his orientation on freedom of speech.

According to our framework, recipients' causal attributions concerning the communicator's position depended on whether this position had confirmed or disconfirmed their premessage expectancy. Confirmation was assumed to favor explanation in terms of the influence of the communicator's background, and disconfirmation to favor the influence of factual evidence. These causal attributions were hypothesized to determine the extent to which the communicator was perceived as biased. Communicator bias was assumed to have a direct effect on opinion change as well as an indirect effect through its impact on message comprehension.

A preliminary tes' of the plausibility of this model was provided by analyses of variance on each of the dependent variables assumed to be involved in postmessage processing. Consistent with the model, these analyses demonstrated that subjects' reactions were appropriately affected by whether their premessage expectancy had been disconfirmed or confirmed by the position the communicator took in the message. Specifically, communicators disconfirming expectancies were perceived as influenced more by the factual evidence relating to the pornography topic and less by their background than were communicators confirming expectancies. Recipients also perceived communicators disconfirming expectancies as less biased than communicators advocating expected positions. Finally, recipients comprehended less of the argumentation in disconfirming than in confirming messages and were more persuaded by such messages.

The relative strength of the effects of expectancy confirmation on recipients' causal attributions, perceptions of communicator bias, message comprehension, and opinion change supported the idea that these responses should be considered a series of successive steps, although inferences about the influence of factual evidence did not conform to this ordering (perhaps because it was difficult to ask about this matter in a clear way). Thus, the strongest effect of expectancy confirmation was on recipients' causal attributions about the communicator's background--a variable assumed to be directly affected by the expectancy manipulation. Expectancy confirmation had a somewhat weaker effect on perceived communicator bias, which was viewed as indirectly affected by this manipulation, through the mediation of recipients' causal attributions. Consistent with the position of message comprehension and opinion change as later responses in the chain, the effects of expectancy confirmation on these variables were still weaker. It should also be kept in mind that the relatively high level of opinion change for disconfirming messages predicted on the basis of recipients' causal analysis may have been attenuated by the linkage of perceived bias and opinion change through the mediation of message comprehension.

Stages in Recipients' Analysis of the Message

Structural analyses were carried out to more closely examine how recipients' causal attributions were linked to their subsequent responses. The structural model was fit separately to the confirmed, disconfirmed, and control conditions because the expectancy-relevant information differed fundamentally between the conditions and provided the event that triggered a particular sequence of postmessage inferences. Indeed, as Figure 2 indicates, slightly different models were found to fit these three conditions.

The structural analysis yielded a relationship between subjects' causal attributions and perceived communicator bias consistent with the assumption that attributions and perceived bias were successive steps in recipients' thinking: In both the confirmed and disconfirmed conditions, recipients' belief that the communicator was influenced by his background led to the perception of him as biased, and the belief that he was influenced by factual evidence led to the perception of him as unbiased. In the control conditions, however, recipients' causal explanations did not show a significant relationship to communicator bias, presumably because information about the communicator's background, which formed the basis for recipients' attributions, was not provided.

Only in the disconfirmed condition was communicator bias a significant predictor of message comprehension--the less biased the communicator was perceived to be under these circumstances, the fewer arguments were comprehended. The fact that the path between communicator bias and message comprehension was not significant in the confirmed or control conditions suggests that the role of message comprehension depends on level of expectancy confirmation. However, such an interpretation is tentative at this point because comparisons between the path coefficients linking communicator bias and message comprehension yielded a difference approaching significance only when the disconfirmed and control conditions were contrasted ($z = 1.60, p = .11$).

In the final steps in recipients' analysis, opinion change was predicted by both perceived communicator bias and message comprehension: Recipients changed their opinions to the extent that they perceived the communicator to be unbiased, and to the extent that they comprehended a large number of message arguments.

Causal Attributions and Message Comprehension

It is interesting to explore the possibility that the role of message comprehension in recipients' postmessage analysis may depend on whether their expectancies are confirmed or disconfirmed. First, it should be recalled that message recipients in conditions in which the communicator disconfirmed premessage expectancies were less receptive to the message content (i.e., recalled fewer message arguments) than recipients in confirmed or control conditions. When the communicator disconfirmed expectancies, recipients could conclusively rule out the possibility that the message was caused by the factor(s) that generated the expectancies. Only external reality was left as a plausible explanation for the communicator's position, and a simple decision rule that employed this relatively unambiguous causal information tended to suffice. Accordingly, to the extent that subjects whose expectancies were disconfirmed believed the source to be unbiased, they could dispense with understanding the arguments, as shown by the significant path in the disconfirmed condition between communicator bias and comprehension (see Figure 2). In contrast, in the confirmed conditions, in which the communicator's position tended to be attributed to the factor(s) that generated the expectancy, the alternate cause, response to a compelling reality, could not be completely ruled out. Therefore, subjects whose expectancies were confirmed faced ambiguity concerning the degree of communicator bias even though they attributed the message to the factor(s) that generated their expectancy. The burden of analyzing message content was present for these subjects, then, regardless of the strength of their attributions. As shown in Figure 2, message comprehension was then an independent contributor to opinion change, not causally linked to perceived communicator bias.

In contrast to the present study, Eagly and Chaiken (1975) found message comprehension greater when the communicator disconfirmed rather than confirmed recipients' expectancies. We suspect that the difference in findings may stem from the fact that the Eagly and Chaiken topics (venereal disease and the job market facing undergraduates) were involving enough that subjects may have anticipated discussing them with peers. Under such circumstances, message content may generally have high utility, and the face validity of messages that disconfirm expectancies may further emphasize the importance of their content.

In general, the findings of the study highlight the importance of viewing opinion change in terms of two types of cognitive processing: (a) causal attributions providing explanations of the communicator's position and leading to the perception of communicator bias, and (b) comprehension of the argumentation contained in the message. The prediction of opinion change by its path determinants would have been less successful had we considered only one of these approaches. In the present study, recipients employed both types of processing: The structural analysis revealed that perceived communicator bias and message comprehension were determinants of opinion change in all conditions. Yet there may be situations that favor one kind of processing over the other. Indeed, it is important to achieve a more general understanding of the conditions under which recipients utilize primarily information about the source of the message, primarily message content, or information of both types. Along these lines, Chaiken (in press) has recently proposed a distinction between two types of cognitive processing by which recipients assess the validity of the position advocated by a communicator: Recipients

can employ (a) a heuristic information-processing strategy characterized by the use of relatively simple decision rules based on easily accessible cues not part of the message, or (b) a more effortful systematic information-processing strategy characterized by comprehension and evaluation of the message's arguments. Chaiken (in press) suggests that low involvement leads message recipients to favor a heuristic strategy, and high involvement leads recipients to favor a systematic strategy. In the present study, the use of causal attributions about the communicator as a guide to determining message validity illustrates a heuristic strategy. It was possibly because of the moderate level of involvement generated by our message topic that recipients relied both on a heuristic decision rule and on analysis of the arguments contained in the message.

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Footnotes

1. Eagly, Wood, and Chaiken (1978) also introduced the concept of reporting bias, a belief that the communicator's willingness to convey an accurate version of external reality is compromised. With only minor modifications, the present analysis is appropriate also for cases in which recipients perceive a reporting bias to affect a communicator.

2. A concrete example may help clarify this point for the reader. Imagine that a liberal politician who is known for his prounion views advocates a prounion position on a particular controversy. His position is likely to be attributed to his prounion background, and he will be perceived as biased. Yet perceivers cannot eliminate the possibility that the politician's position is also the most valid in this particular case.

3. As Eagly, Wood, and Chaiken (1978) noted, these assumptions concerning the way perceivers use information about probable causes of communicators' positions are related to Kelley's (1972) discounting principle, for messages confirming expectancies, and to his augmentation principle, for messages disconfirming expectancies.

4. Communicators whose knowledge is judged to be biased are nevertheless perceived as sincere because they are believed to be expressing their genuine opinions (Eagly, Wood, & Chaiken, 1978).

5. The magnitude of the direct relation between communicator bias and opinion change in the structural model (communicator bias → opinion change) is indicated by the path coefficient linking the two variables (which in the present case is identical to the correlation between them). In contrast, the magnitude of the indirect relation between communicator bias and opinion change

(communicator bias → message comprehension → opinion change) is calculated by multiplying the path coefficient linking bias and comprehension by the path coefficient linking comprehension and opinion change (Kerlinger & Pedhazur, 1973). For example, assuming that all coefficients equal .5, the magnitude of the direct effect would be .5 and of the indirect effect would be (.5) (.5) = .25.

6. It is possible to conduct a structural analysis which tests hypotheses about the impact of a manipulation as well as hypotheses about the relations between dependent variables (Bentler, 1980). However, hypotheses addressing these two concerns will be tested in separate analyses in the present paper.

7. Only on ratings of open-mindedness, which yielded an Initial Position X Confirmation interaction ($p < .05$), were the sources perceived differently: The communicator with the profreedom of speech orientation was marginally more open-minded ($p < .10$; posthoc comparison by Scheffé method).

8. The predicted effects on these dependent variables imply a significant main effect for expectancy confirmation. However, for brevity only the corresponding planned comparisons are given in the text. These main effects were significant or marginally significant on all dependent variables. None of these dependent variables yielded a significant main effect for subjects' initial position or discrepancy or any significant interactions, with one exception: The communicator was rated as more objective

when advocating a moderate rather than an extreme position ($p < .01$).

9. Analysis of covariance on recipients' postmessage positions, employing premessage positions as a covariate, resulted in findings very similar to the analysis of variance on change scores reported in the text.

10. To further test whether the paths that were deleted from the model significantly decreased our predictive ability, the multiple correlation obtained from including all predictors in a regression equation was compared to that obtained when just the significant predictors were included (Kenny, 1979). In all conditions, comparing the prediction of opinion change from the restricted and complete equations revealed no significant difference, as did a similar comparison for message comprehension. In the control condition, because the hypothesized predictors of communicator bias were deleted from the model, the multiple correlation obtained from the full equation predicting communicator bias was merely tested for significance, and it proved nonsignificant.

Table 1

Experimental Design

Confirmation of expectancy	Subjects favored and source opposed restricting pornography		Subjects opposed and source favored restricting pornography	
	Source advocated moderately discrepant position	Source advocated extremely discrepant position	Source advocated moderately discrepant position	Source advocated extremely discrepant position
Confirmed	Source's background: profreedom of speech	Source's background: profreedom of speech	Source's background: antifreedom of speech	Source's background: antifreedom of speech
Disconfirmed	Source's background: antifreedom of speech	Source's background: antifreedom of speech	Source's background: profreedom of speech	Source's background: profreedom of speech
Control	Source's background: not provided	Source's background: not provided	Source's background: not provided	Source's background: not provided

Note. This design was implemented twice--once for expectancy subjects (cell ns ranged from 9 to 11) and once for persuasion subjects (cell ns ranged from 23 to 25).

Table 2

Mean Causal Attributions, Communicator Bias, Message Comprehension, and Opinion Change as a Function of Confirmation of Expectancy

Dependent variable	Expectancy confirmed	Expectancy disconfirmed	Control
Attribution of message to communicator's background	11.81	6.40	8.45
Attribution of message to factual evidence	10.39	11.84	10.47
Communicator bias	9.35	7.43	9.27
Message comprehension	2.36	2.08	2.40
Opinion change	1.56	2.51	1.94

Note. Higher numbers indicate greater attribution to causal factors, perception of the communicator as more biased, more message arguments comprehended, and greater opinion change.

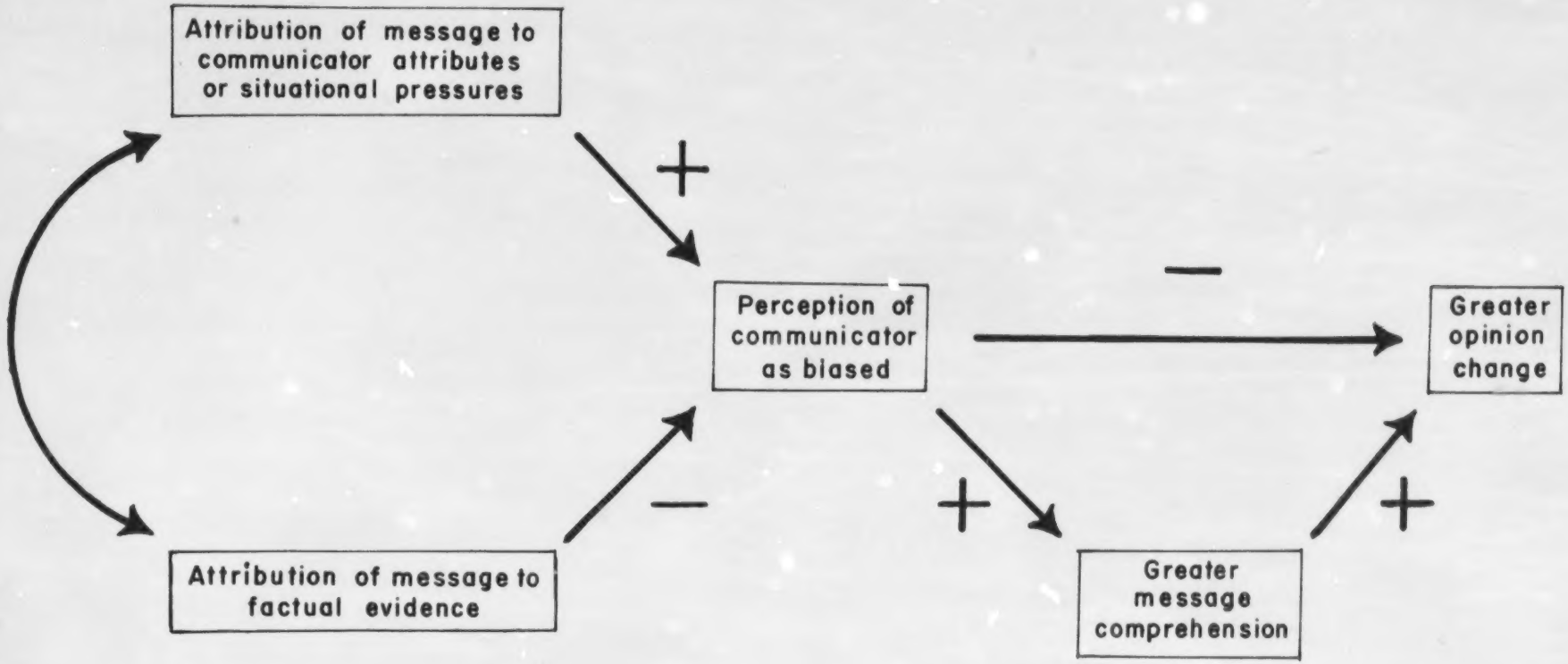
Table 3

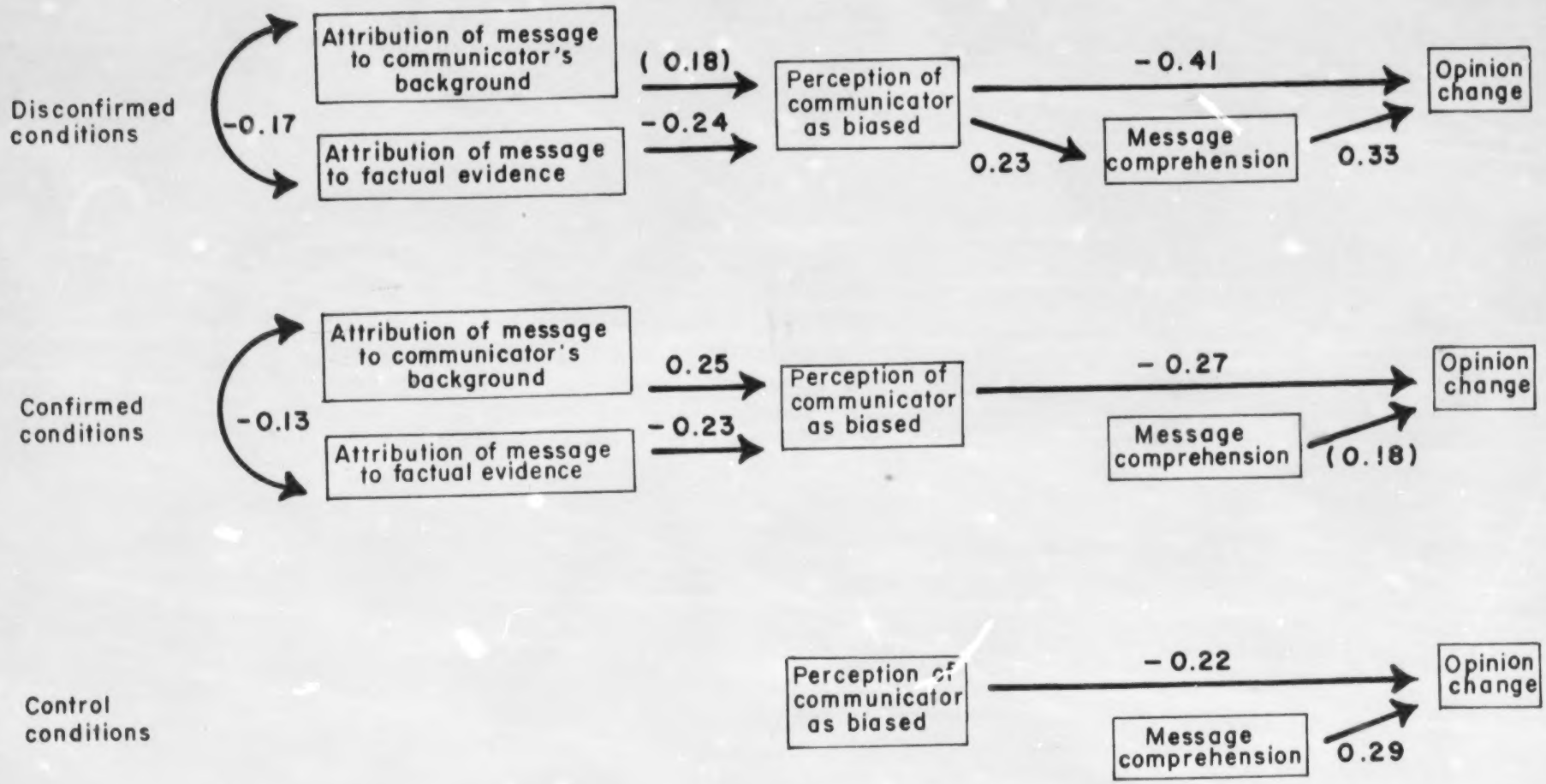
Correlations between Opinion Change and Hypothesized Mediators for Expectancy Disconfirmed, Expectancy Confirmed, and Control Conditions

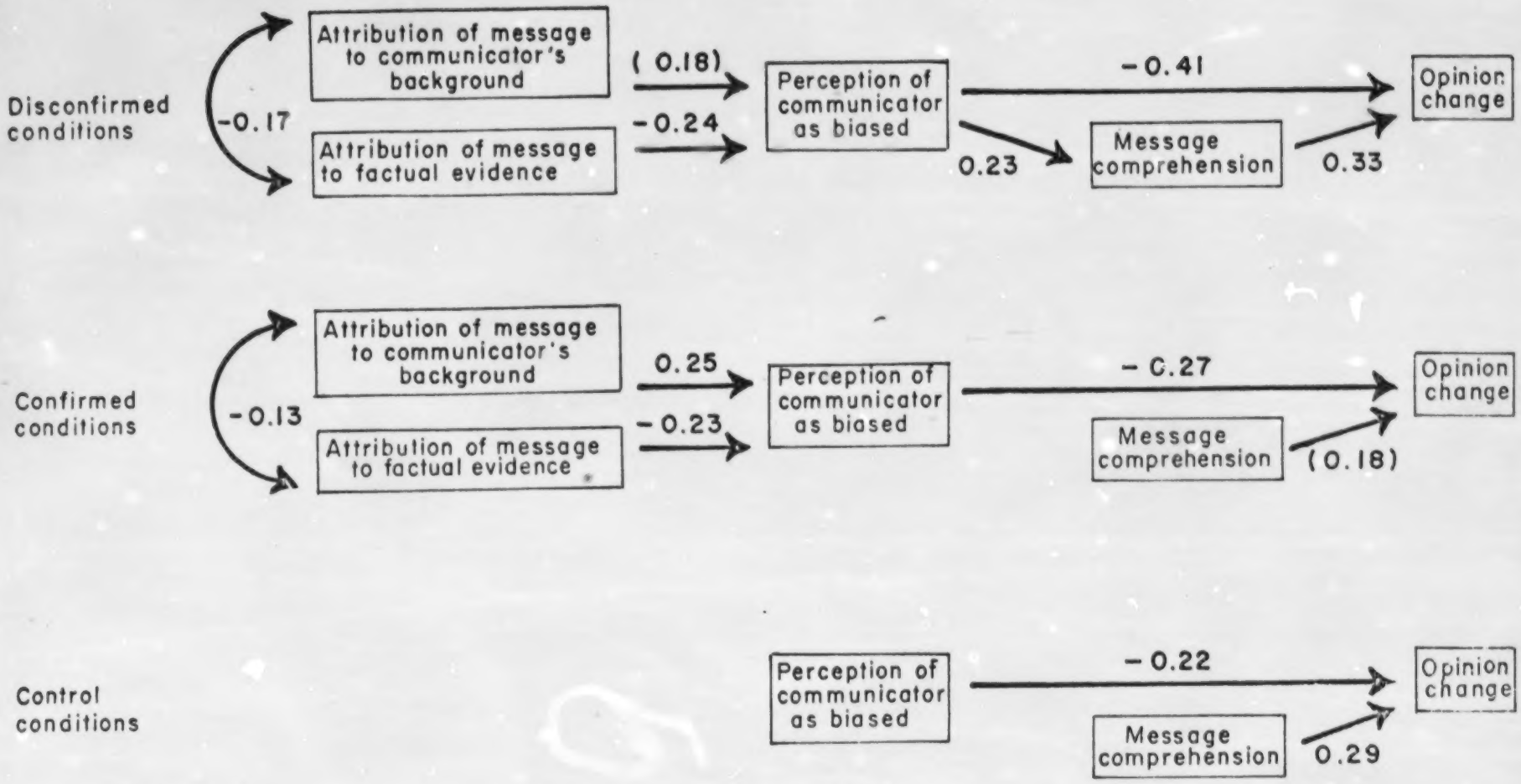
Variable	Expectancy disconfirmed Variable				Expectancy confirmed Variable				Control Variable			
	2.	3.	4.	5.	2.	3.	4.	5.	2.	3.	4.	5.
1. Attribution of message to communicator's background	-.18	.22	.10	-.09	-.15	.28	-.03	-.07	-.09	.05	.04	-.07
2. Attribution of message to factual evidence		-.27	-.05	.16		-.26	-.05	.19		-.17	-.10	.16
3. Communicator bias			.23	-.33			.14	-.25			.00	-.22
4. Message comprehension				.24				.15				.29
5. Opinion change												

Figure 1. Proposed causal model for structural analysis depicting relationships between mediators and opinion change. The single-headed arrows denote hypothesized causal paths and the two-headed arrow denotes a correlation among exogenous variables. The signs appended to the arrows indicate whether a positive or negative relationship is hypothesized to exist between variables.

Figure 2. Results of the structural analysis for disconfirmed, confirmed, and control conditions. Values in parentheses indicate a marginally significant ($p < .10$) path coefficient; all others are significant beyond the .05 level. Correlations among the exogenous variables are appended to the paths with two-headed arrows.


Attribution of message to communicator attributes or situational pressures
+
Perception of communicator as biased
−
Greater opinion change
Attribution of message to factual evidence
−
+
Greater message comprehension
+


Disconfirmed conditions
Attribution of message to communicator's background
Attribution of message to factual evidence
-0.17
(0.18)
-0.24
Perception of communicator as biased
-0.41
0.23
Message comprehension
0.33
Opinion change
Confirmed conditions
Attribution of message to communicator's background
Attribution of message to factual evidence
-0.13
0.25
-0.23
Perception of communicator as biased
-0.27
Message comprehension
(0.18)
Opinion change
Control conditions
Perception of communicator as biased
-0.22
Message comprehension
0.29
Opinion change


Disconfirmed conditions
-0.17
Attribution of message to communicator's background
Attribution of message to factual evidence
(0.18)
-0.24
Perception of communicator as biased
-0.41
0.23
Message comprehension
0.33
Opinion change
Confirmed conditions
-0.13
Attribution of message to communicator's background
Attribution of message to factual evidence
0.25
-0.23
Perception of communicator as biased
- 0.27
Message comprehension
(0.18)
Opinion change
Control conditions
Perception of communicator as biased
- 0.22
Message comprehension
0.29
Opinion change